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Approved By: Robin Smith	

Cobalt Thiocyanate Test

1. Purpose and Scope

This color test is used in forensic drug analysis as a test method for the differentiation of the chemical forms (salts or base) of cocaine.

2. Definitions

No definitions are required for this instruction.

3. Safety Instructions

Chemical Hazard

4. Instructions

1. Cobalt Thiocyanate preparation

Cobalt Thiocyanate solution is prepared by adding 6 grams of cobalt nitrate and 18 grams of potassium thiocyanate to 100mL distilled water.

2. Test Procedure

Add sample material to a small test tube.

Add 1-2 mL hexane to test tube and vortex.

Remove aliquot of hexane to 2nd test tube.

Add 5-6 drops of the cobalt thiocyanate solution to test tube.

Vortex and observe a blue, fluffy precipitate indicating the presence of cocaine base.

To 1st test tube, add 1-2 mL distilled water, vortex and allow to separate.

Remove aliquot of bottom layer (water) to 3rd test tube.

Add chloroform to 3rd test tube.

Add 5-6 drops of cobalt thiocyanate solution to test tube.

Observe for blue color which transfers into the chloroform layer indicating the presence of cocaine salts.

5. Notes

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6. FC-Instruments/Equipment/Materials

Pipet

Test tubes

Vortex

7. FC-Chemicals/Reagents

Chloroform

Cobalt Thiocyanate Reagent

Distilled water

Hexane

8. Records

Drug Chemistry Checklist

FORM-FC-01

9. Policy References

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10. Procedure References

No procedures are referenced by this instruction.

11. Instruction References

No instructions are referenced by this instruction.

12. Other Reference Documents

There are no other reference documents for this instruction.
